

Applicant: James A. Proctor, Jr.
Application No.: 09/772,176

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for adapting to rapid changes affecting a received wireless signal, the method comprising:

~~determining whether receiving a measurement of a metric of a amplitude variance modulation attribute is an amplitude of the wireless signal, a frequency of the wireless signal, or a phase of the wireless signal;~~

~~determining a rapid change in the wireless signal by comparing the measurement to a predetermined threshold instantaneously detecting motion of a communication device associated with a signal path over which the wireless signal is transmitted based on the determined measurement;~~

~~selecting a parameter adjustment from a plurality of parameters related to the received wireless signal, based on the instantaneously detected motion determined rapid change; and~~

performing the parameter adjustment.

2. (Currently Amended) The method as in claim 1, wherein the ~~detecting determining~~ is performed by a mobile station.

Claims 3-4 (Canceled)

5. (Currently Amended) The method as in claim 1, wherein the ~~detecting determining~~ is based on a signal in an automatic gain control (AGC) loop.

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6. (Currently Amended) The method as in claim 5, wherein the ~~detecting determining~~ is a function of a ~~statistic~~ variance of the signal in the AGC loop.

7. (Canceled)

8. (Currently Amended) The method as in claim [[1]] 62, wherein the ~~detecting determining~~ is based on a phase error signal produced by at least one of a delay lock loop, matched filter, or correlator.

9. (Currently Amended) The method as in claim 8, wherein the ~~detecting determining~~ is a function of a ~~statistic~~ variance of the phase error signal.

10. (Canceled)

11. (Currently Amended) The method as in claim [[1]] 62, wherein the ~~metrie measurement~~ is based on a frequency error signal in a frequency control loop.

12. (Currently Amended) The method as in claim 11, wherein the ~~detecting determining~~ is a function of a ~~statistic~~ variance of the frequency error signal.

13. (Canceled)

14. (Canceled)

Claim 15 (Canceled)

16. (Previously presented) The method as in claim 1, wherein the selecting the parameter adjustment includes selecting an antenna mode, which comprises changing from directive to omni-directional.

17. (Previously presented) The method as in claim 1, wherein the selecting the parameter adjustment includes selecting an antenna mode, which comprises changing from omni-directional to directive.

Claim 18 (Canceled)

19. (Previously presented) The method as in claim 1, wherein the selecting the parameter adjustment includes selecting to reduce at least one of forward error correction (FEC) coding rate, or the number of modulation symbols, to a minimum level while maintaining the signal path.

Claim 20 (Canceled)

21. (Currently Amended) An apparatus for adapting to rapid changes affecting a received wireless signal, the apparatus comprising:

a processing unit configured to ~~determine whether receive~~ a measurement of a metric of a modulation attribute is an amplitude variance of the wireless signal, a frequency of the wireless signal, or a phase of the wireless signal, and to ~~instantaneously detect motion of a communication device associated with a signal~~

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~~path over which the wireless signal is transmitted based on the determined measurement and to determine a rapid change in the wireless signal by comparing the measurement to a predetermined threshold; and~~

a compensator configured to perform a signaling parameter adjustment from a plurality of parameters related to the received wireless signal, responsive to the motion instantaneously detected rapid change determined by the processing unit.

22. (Previously presented) The apparatus as in claim 21, configured as a mobile station.

Claims 23–24 (Canceled)

25. (Currently Amended) The apparatus as in claim 21, wherein the processing unit is configured to ~~detect~~ determine the measurement motion based on a signal in an automatic gain control (AGC) loop.

26. (Currently Amended) The apparatus as in claim 25, wherein the processing unit is configured to ~~detect~~ determine the measurement motion as a function of a ~~statistic~~ variance of the signal in the AGC loop.

27. (Canceled)

28. (Currently Amended) The apparatus as in claim [[21]] 64, wherein the processing unit is configured to ~~detect~~ determine the measurement motion based on a phase error signal produced by at least one of a delay lock loop, a matched filter, or a correlator.

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29. (Currently Amended) The apparatus as in claim 28, wherein the processing unit is configured to ~~detect~~determine the measurement motion as a function of a ~~statistic~~variance of the phase error signal.

30. (Canceled)

31. (Currently Amended) The apparatus as in claim [[21]] 64, wherein the processing unit is configured to ~~detect~~determine the measurement motion based on a frequency error signal in a frequency control loop.

32. (Currently Amended) The apparatus as in claim 31, wherein the processing unit is configured to ~~detect~~determine the measurement motion as a function of a ~~statistic~~variance of the frequency error signal.

33. (Canceled)

34. (Canceled)

35. (Previously presented) The apparatus as in claim 21, further comprising:

an antenna having a changeable antenna mode, wherein the compensator is configured to change an antenna mode.

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36. (Previously presented) The apparatus as in claim 35, wherein the compensator is configured to change an antenna mode between directive and omnidirectional modes.

Claims 37-38 (Canceled)

39. (Previously presented) The apparatus as in claim 21, wherein the compensator is configured to reduce at least one of forward error correction (FEC) coding rate, or the number of modulation symbols, to a minimum level while maintaining the signal path.

Claims 40-41 (Canceled)

42. (Currently Amended) A non-transitory computer-readable storage medium containing a set of instructions for a general purpose computer, the set of instructions comprising:

a signal adaptation code segment configured to cause a processor to control a signaling path to adapt to rapid changes affecting the signaling path after ~~determining whether a measurement of a metric of a modulation attribute is an~~ receiving a measurement of amplitude variance of ~~the~~ a received wireless signal, ~~a frequency of the wireless signal, or a phase of the wireless signal;~~

a detection code segment configured to ~~determine a rapid change in the wireless signal by comparing the measurement to a predetermined threshold~~ ~~instantaneously detect motion of a communication device associated with a signal path over which the wireless signal is transmitted based on the determined measurement of;~~ and

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an adjusting code segment configured to perform a signaling parameter adjustment from a plurality of parameters related to the received wireless signal, responsive to the ~~motion detected~~ rapid change determined by the detecting code segment.

Claims 43-61 (Canceled)

62. (New) The method of claim 1 further comprising receiving a measurement of a frequency variance of the wireless signal or a phase variance of the wireless signal.

63. (New) The method of claim 1 wherein the determined rapid change is attributable to motion of a communication device associated with a signal path over which the wireless signal is transmitted or motion of an external object in the signal path.

64. (New) The apparatus of claim 21 further comprising receiving a measurement of a frequency variance of the wireless signal or a phase variance of the wireless signal.

65. (New) The apparatus of claim 21 wherein the determined rapid change is attributable to motion of a communication device associated with a signal path over which the wireless signal is transmitted or motion of an external object in the signal path.